

REMARKS

In view of the following remarks, reconsideration of the rejections contained in the Office Action of April 2, 2003 is respectfully requested.

The Examiner has asserted that a foreign reference submitted with the IDS filed December 24, 2002 was placed in the application file, but not considered. In particular, the IDS did not include a concise explanation of the relevance of German-language reference DE 29810792, so that the reference could not be considered. Consequently, an IDS including an English abstract of reference DE 29810792 has been submitted herewith, and the Examiner is respectfully requested to consider this information.

The Examiner has rejected claims 15-19, 21, 24 and 27 as being unpatentable over the Nakada reference (USP 5,792,302) in view of the Nishibori reference (USP 4,505,869); and has rejected claims 20, 22, 23, 25, 26, 28 and 29 as being unpatentable over the Nakada reference, the Nishibori reference, and further in view of the Young, Jr. reference (USP 3,802,291), the Kiyoshi reference (JP 07117326), and the Uchida reference (USP 4,581,954). However, these rejections are respectfully traversed. For the reasons discussed below, it is respectfully submitted that pending claims 15-29 are clearly patentable over the prior art of record.

The present invention is directed to a steering wheel that comprises an annular rim section including a core and arcuate-shaped and elongated rim elements mounted on the core. Each of the elongated rim elements is formed of *thermosoftening synthetic resin material* blended with woodmeal so as to form an annular streak pattern *on an outer surface* of each of the elongated rim elements and *extending along a longitudinal axis* of each of the elongated rim elements.

As explained on page 1 of the specification, conventional wooden steering wheels provide numerous advantages, including a desirable appearance and feel. Unfortunately, real (natural) wood often quickly deteriorates due to atmospheric conditions, including moisture, temperature, and direct sunlight. In addition, real wood is difficult and expensive to obtain. Thus, the present invention provides a steering wheel that accurately replicates a specific, desirable grain pattern of wood by providing an annular streak pattern extending along a longitudinal axis of each arcuate-shaped element, without also having the undesirable characteristics of natural wood as discussed above.

The Nakada reference is directed to a manufacturing method for a molded article. In

particular, a *wooden surface layer 4* is placed in a mold 11 (see column 3, lines 33-40). Then a foam resin material 3 is supplied into the mold inside the wood surface layer 4 so as to be arranged between a core wire 2 and the wooden surface layer 4 (see column 4, lines 36-42). Thus, as illustrated in the sectional views of Figure 3 and 5, the molded article disclosed in the Nakada reference includes a *wooden* outer surface layer 4. Consequently, the Nakada reference does not disclose or suggest arcuate-shaped and elongated rim elements mounted on a core, in which each of the rim elongated elements is formed of *thermosoftening synthetic resin material blended with woodmeal so as to form an annular streak pattern on an outer surface* of each of the elongated rim elements.

Nonetheless, the Examiner asserts that the Nishibori reference teaches forming a product of thermosoftening synthetic resin material blended with woodmeal to produce an annular streak pattern extending along a longitudinal axis of the rim elements, and that this reference would motivate one of ordinary skill in the art to modify the Nakada reference to obtain the invention recited in independent claim 15. However, it is submitted that the combination of the Nakada reference and the Nishibori reference would not motivate one of ordinary skill in the art to obtain the present invention recited in claim 15 for several reasons.

Firstly, it is submitted that the Nishibori reference does not teach arcuate-shaped and elongated rim elements formed of thermosoftening synthetic resin material blended with woodmeal *so as to form an annular streak pattern on an outer surface of each of the elongated rim elements and extending along a longitudinal axis of each of the elongated rim elements*. The Examiner asserts that column 1, lines 45-49 of the Nishibori reference teaches that the molded product according to the Nishibori reference has "surface characteristics identical with those of wood in actual use, namely, color, touch, finish coating, adhesion, laminating, etc." However, independent claim 15 of the present application does not recite that the rim elements have "surface characteristics identical with those of wood in actual use", but instead specifically recites that each of the rim elements have an annular streak pattern on an outer surface and extending along a longitudinal axis of each of the elongated rim elements.

As explained in the response filed February 19, 2003, the surface appearance of wood will vary greatly depending on various factors, including the type of wood used and the angle of the cut through the wood. Thus, merely explaining that a product is provided "with surface characteristics

identical with those of wood in actual use" is not the same as teaching that a resin material is blended with woodmeal so as to form an annular streak pattern on an outer surface of each of the elongated rim elements and extending along a longitudinal axis of each of the elongated rim elements.

Moreover, the Nishibori reference teaches that the woodmeal added to the thermoplastic resin binder is prepared by mixing woodmeal with a thermosetting urea resin to form an aggregate material. The aggregate material is then *dried* so as to reduce the water content therein (see column 2, line 66 through column 3, line 13; and column 4, lines 61-68). Although the Examiner notes that the particular *method* of forming the product is not in question with respect to the present *apparatus* claims, the method of the Nishibori reference is still relevant to prove that the Nishibori reference does not disclose or teach what the Examiner asserts that it teaches. Specifically, one of ordinary skill in the art would understand that if the dried aggregate is added to a thermoplastic resin binder and is extruded as described in the Nishibori reference, the dried woodmeal aggregate could not form an annular streak pattern on a surface of the product due to, for example, the friction of the woodmeal aggregate. In other words, there must be a minimum level of moisture contained within the woodmeal aggregate in order to allow a streak pattern to extend along a longitudinal axis of each of the elongated rim elements. Thus, not only does the Nishibori reference *not* explicitly disclose or suggest that rim elements are formed by blending woodmeal with a thermosoftening synthetic resin to form annular streak patterns along a longitudinal axis of each of the elongated rim elements, but the Nishibori reference actually *teaches away* from this arrangement because the process disclosed in the Nishibori reference would *not allow* formation of annular streaks as recited in claim 15.

In addition to the fact that the Nishibori reference does not teach forming an annular streak pattern as discussed above, it is submitted that one of ordinary skill in the art would not be motivated to combine the Nakada reference and the Nishibori reference as suggested by the Examiner. Firstly, as explained above, the Nakada reference discloses that the molded article has an outer *wooden* surface layer 4. Therefore, since the outer surface of the element disclosed in the Nakada reference already has an actual wooden surface layer with the corresponding desirable appearance, there is no reason to blend woodmeal with a thermosoftening synthetic resin to provide "surface characteristics identical with those of wood in actual use," as taught by the Nishibori reference. Secondly, as explained above, the Nakada reference teaches forming an element by filling a mold 11 with foam

resin material 3. If, however, the mixture of the woodmeal aggregate and the thermoplastic resin binder material as taught in the Nishibori reference is formed using the mold 11 of the Nakada reference, an annular streak pattern extending along a longitudinal axis of each of the elongated rim elements could not be formed. Consequently, it is submitted that one of ordinary skill in the art would not be motivated to combine the Nakada reference and the Nishibori reference as suggested by the Examiner in order to obtain the invention recited in independent claim 15.

The Young, Jr. reference, the Kiyoshi reference and the Uchida reference, also do not, either alone or in combination, disclose or suggest arcuate-shaped and elongated rim elements formed of thermosoftening synthetic resin material blended with woodmeal so as to form an annular streak pattern on an outer surface of each of the elongated rim elements and extending along a longitudinal axis of each of the elongated rim elements. Therefore, one of ordinary skill in the art would also not be motivated by any of these references to modify the Nakada or Nishibori reference so as to obtain the invention recited in independent claim 15. Accordingly, it is respectfully submitted that independent claim 15 and the claims that depend therefrom are clearly patentable over the prior art of record.

In addition to the distinctions discussed above, dependent claim 28 recites a further distinction between the present invention and the prior art. Specifically, dependent claim 28 recites that the arcuate rim elements include a first rim element having a longitudinal notch formed therein for receiving the core, and include a second rim element having *a uniform thickness substantially equal to a diameter of the core* and being fitted into the notch of the first rim element after the core. This embodiment of the invention is illustrated in Figure 5b of the present application, in which the second rim element 41b, 42b, clearly has a *uniform* thickness substantially equal to a diameter of the core 44. The Examiner asserts that the Uchida reference shows a steering wheel comprising an arcuate rim element 10' including a first rim element 11 having a notch formed therein for receiving a core 7, and a second rim element 114 having a thickness substantially equal to the diameter of the core 7. However, the second rim element 114 clearly does not have a *uniform thickness substantially equal to a diameter of a core*. In fact, it does not appear as though the thickness of the second rim element 114 is substantially equal to the diameter of the core at any location, much less uniformly. Consequently, in view of these additional distinctions, the Examiner is respectfully requested to

reconsider the rejection of dependent claim 28.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the applicant's undersigned representative.

Respectfully submitted,

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